

percentage at 46.7. SOM showed significant differences amongst the trails, Seraya Trail had the highest organic matter content at 7% while the Knowledge Trail only averaged 4.6%. These results showed various correlation effects between intensity of visitor and soil properties. It was proved that the intensity of visitor usage has a significant effect on the soil in the rainforest area. Disturbance density increased soil compaction and reduced MC and SOM respectively. From this finding, soil is identified as an important factor in the MBCA for the determination of number of visitors allowed per area at any one time.

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### **Oak woodlands and ecosystems services in southern Spain**

Oak woodlands occupy about 1.200.000 ha in the Andalusian region, South Spain. In this poster we present an overview of the singularity of these southern European oak woodlands, their recent history and the ecosystem services they provide.

During the last 50 years there has been little variation in the total forested (including shrublands) surface of South Spain (about 40% of total) but the relative composition has varied strikingly, mainly by the massive plantations of pines and eucalyptus.

Among the singular provisioning services provided by the Andalusian oak forests we can remark the production of cork from the *Quercus suber* (about 40,000 metric tons/year), and the production of high quality meat from free-range animals raised in the oak-savannas, called "dehesas".

Regulating services associated to the oak forests capacity to sequester carbon and therefore to mitigate climatic change are increasingly considered. The capacities to regulate water and air quality and to protect soil from erosion are other regulating services of relevance.

Cultural services provided by oak woodlands have increased demand from urban populations using them for recreation and ecotourism. At the same time, the abandonment of rural areas is provoking a loss of cultural services associated to local knowledge and cultural identity, as well as a deterioration of cultural diversity in sylvo-pastoral landscapes.

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### **National Trust's ancient tree management**

The paper will describe the National Trust's ancient tree management with several short case studies from around the country, all of which have ongoing restoration work taking place. These could include properties such as: Widdon deer park at Castle Drogo in Devon; Holt Forest at Kingston Lacy in Dorset; Walcot Park in Shropshire; Borrowdale in Cumbria; and Hatfield Forest in Essex.

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